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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,148	08/19/2003	Yukitoshi Sanada	031017	3546
23850	7590	12/12/2006	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP			ETTEHADIEH, ASLAN	
1725 K STREET, NW				
SUITE 1000			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20006			2611	

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/643,148

Applicant(s)

SANADA, YUKITOSHI

Examiner

Aslan Ettehadieh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 May 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/5 11/19.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 06/05/2006 fails to comply with MPEP § 2218 because the submission of SANADA, Yukitoshi; "Proposal of a Pulse Position Controlled DS-UWB System;" 2002 Engineering Sciences Society Conference of IEICE; p. 105, A-5-9; August 2002 does not at the least include an English translation of the abstract/summary.

The information disclosure statement filed 06/05/2006 will be considered with the exclusion of SANADA, Yukitoshi; "Proposal of a Pulse Position Controlled DS-UWB System;" 2002 Engineering Sciences Society Conference of IEICE; p. 105, A-5-9; August 2002.

A copy of each cited patent or printed publication, as well as a translation of each non-English document (or a translation of at least the portion(s) relied upon) is required so that all materials will be available to the examiner for full consideration. See MPEP § 2218.

### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. The abstract of the disclosure is objected to because the Abstract of the Disclosure: A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an

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abstract was published with the international application under PCT Article 21.

The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e). See MPEP § 608.01(f). Also, please remove “[Object]” and “[Solution Means]”.

Correction is required. See MPEP § 608.01(b).

### ***Drawings***

4. Figure 2a, 3, 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the echo detector must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one

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figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

6. Claims 1 and 4 are objected to because of the following informalities: examiner believes applicant means "when" instead of "where" (claim 1 lines 10 and 16; and claim 4 lines 10 and 16). Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1 – 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable

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one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. No new matter can be added.

Please refer to applicant Patent Application Publication: Sanada US

2004/0174925 for notation to figures and paragraphs in the specification.

9. Regarding claims 1 and 4, "generating a pulse at the second chip period when generating a pulse of the same polarity as that of the immediately preceding pulse" is not shown in figure 2b, figure 2b shows that the same pulse is also located at 0,  $T_c/2$  and a inverse polarity at approximately  $3T_c/2$ , and does not show an immediately preceding pulse. Also, there is an overlapped signal at  $T_c/2$  where is it not clear if this is an amplitude adjustment or a pulse/echo of the same polarity, etc.; "generating a pulse at the first chip period when generating a pulse of the inverse polarity to that of the immediately preceding pulse" is not shown in figure 2b, figure 2b shows a inverse pulse only at approximately  $3T_c/2$  but does not show an immediately preceding pulse; "generating a pulse at the second chip period when generating a pulse of the same polarity as that of the immediately preceding pulse and generating a pulse at the first chip period when generating a pulse of the inverse polarity to that of the immediately preceding pulse where the echo detected by said echo detector has the same polarity" is not shown in figure 2b, figure 2b shows only two pulses at 0 and  $T_c/2$  and an inverse pulse at approximately  $3T_c/2$ , it also shows smaller pulses at approximately  $T_c/4$ ,  $T_c/2$ , (2)  $3T_c/4$ ,  $5T_c/4$  and an inverted smaller pulse at approx.  $7T_c/4$ , and where it is not clear as to there being an overlapped signal at  $T_c/2$  and approx.  $3T_c/4$  where is it not clear if this is an amplitude adjustment or a

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pulse/echo of the same polarity, etc.; "generating a pulse at the first chip period when generating a pulse of the same polarity as that of the immediately preceding pulse" is not shown in figure 2b, figure 2b shows that the same pulse is also located at 0,  $T_c/2$  and a inverse polarity at approximately  $3T_c/2$ , and does not show an immediately preceding pulse. Also, there is an overlapped signal at  $T_c/2$  where is it not clear if this is an amplitude adjustment or a pulse/echo of the same polarity, etc.; "generating a pulse at the second chip period when generating a pulse of the inverse polarity to that of the immediately preceding pulse" is not shown in figure 2b, figure 2b shows a inverse pulse only at approximately  $3T_c/2$  but does not show an immediately preceding pulse; "generating a pulse at the first chip period when generating a pulse of the same polarity as that of the immediately preceding pulse and generating a pulse at the second chip period when generating a pulse of the inverse polarity to that of the immediately preceding pulse where the echo detected by said echo detector has the inverse polarity" is not shown in figure 2b, figure 2b shows only two pulses at 0 and  $T_c/2$  and an inverse pulse at approximately  $3T_c/2$ , it also shows smaller pulses at approximately  $T_c/4$ ,  $T_c/2$ ,  $(2) 3T_c/4$ ,  $5T_c/4$  and an inverted smaller pulse at approx.  $7T_c/4$ , and where it is not clear as to there being an overlapped signal at  $T_c/2$  and approx.  $3T_c/4$  where is it not clear if this is an amplitude adjustment or a pulse/echo of the same polarity, etc. In paragraph 42, how is this an example of correlated output value (set of correlated pulses  $\{1,1,-1,-1\}$  and  $\{1,-1,-1,1\}$ ) being used in generating the result, this does not correspond to the figure 2b. Also, the claim as a whole is vague and unclear. Further it is not

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clear how the pulse generator is performing these functions, what capabilities are allowing for these functions to occur.

10. Regarding claims 2 – 3 and 5 – 6, claims 2 – 3 and 5 – 6 are dependent on claims 1 and 4, and therefor are also rejected due to being unclear for the reasons mentioned above.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1 – 6 replete with a numerous 35 U.S.C. 112 second paragraph problems. A few examples are provided here:

13. Regarding claim 1, claim 1 recites the limitations “the polarity” (line 2), “the position” (line 3), “the second chip period” (line 3), “the first chip period” (line 4), “the original chip period” (line 4), “the same polarity” (line 7), “the immediately preceding pulse chip period” (line 8), “the inverse polarity” (line 9), etc... There is insufficient antecedent basis for this limitation in the claim.

14. Regarding claim 4, claim 4 recites the limitations “the polarity” (line 2), “the position” (line 3), “the second chip period” (line 3), “the first chip period” (line 4), “the original chip period” (line 4), “the same polarity” (line 7), “the immediately preceding pulse chip period” (line 8), “the inverse polarity” (line 9), etc... There is insufficient antecedent basis for this limitation in the claim.

Applicant's attention for carefully reviewing pending claims for such other indefiniteness.

***Contact Information***



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aslan Ettehadieh whose telephone number is (571) 272-8729. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aslan Ettehadieh  
Examiner  
Art Unit 2637

AE

  
KHAI TRAN  
PRIMARY EXAMINER